

SE

P. 11991

Am. Econ.

17

THE
WATER DIFFICULTY

A SUGGESTED SOLUTION

BY

THOMAS A. WELTON, F.C.A., F.S.S.

LONDON

DOWNEY & CO. LIMITED

12 YORK STREET, COVENT GARDEN

1901

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 311

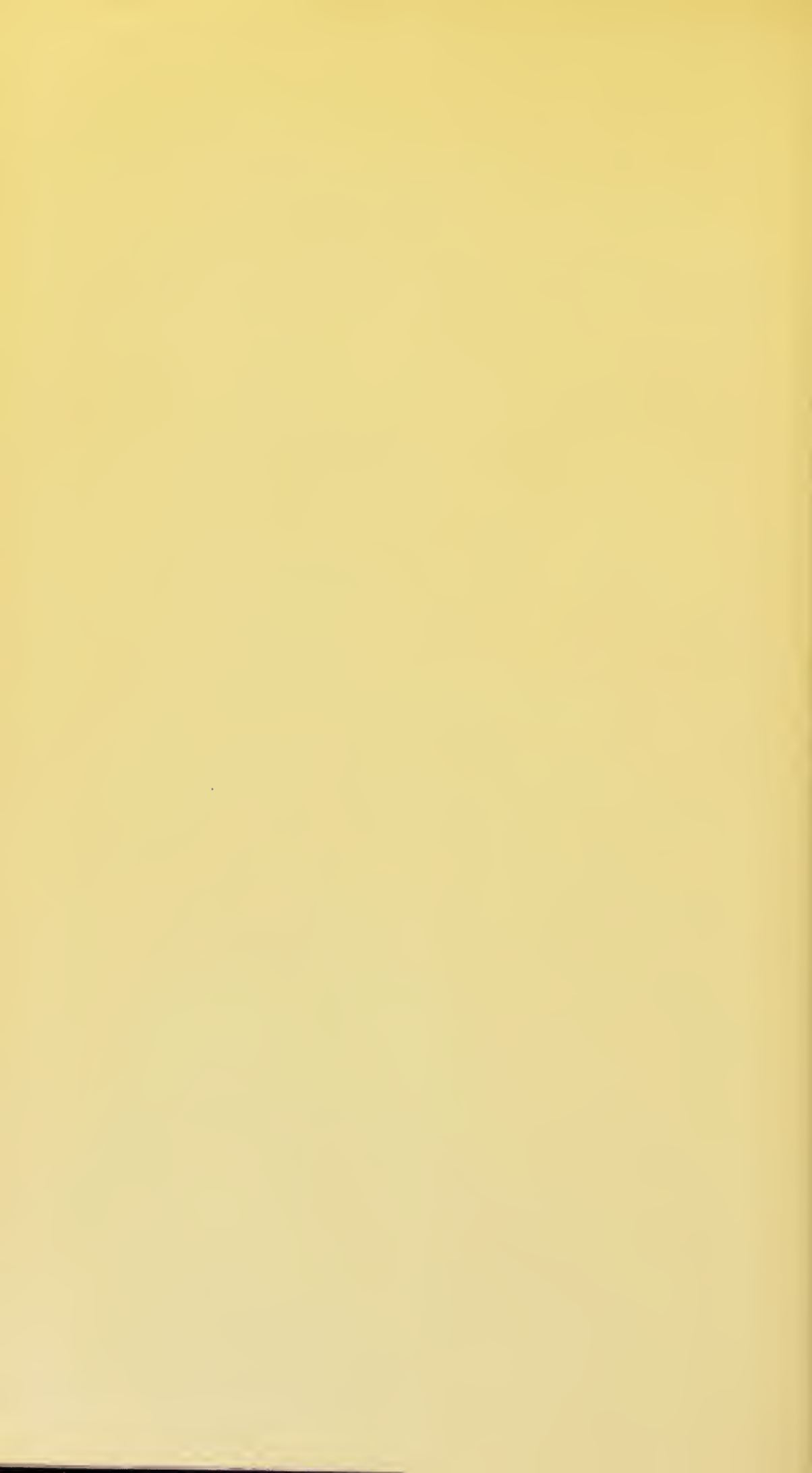
PROFESSOR

THE
WATER DIFFICULTY

A SUGGESTED SOLUTION

BY
THOMAS A. WELTON, F.C.A., F.S.S.

LONDON
DOWNEY & CO. LIMITED
12 YORK STREET, COVENT GARDEN
1901



THE WATER DIFFICULTY.

A Suggested Solution.

By THOMAS A. WELTON, F.C.A., F.S.S.

THE present capital engaged in Metropolitan Water Companies' undertakings was at the end of 1897 as follows:—

	Nominal. £	Market Value. £	Income. £
Ordinary Stock... ..	10,228,548	32,645,189	973,741
Preference Stock ...	801,676		39,271
Irred. Debenture Stock	4,250,110	9,060,254	175,557
Redeem. do.	1,109,950		33,174
Kent Co. Mortgage ...	42,000		1,470
		<u>£41,705,443</u>	<u>£1,223,213</u>

The preferences and debts above stated are as they stood in June, 1898.

The area served appears to have been in 1898—

120	square miles	County of London	4,478,396	inhabitants.
230	„	outside	1,341,187	„
<u>350</u>			<u>5,819,583</u>	

I am of opinion that for financial reasons (if there were no other) it is of the first importance that an area even larger than the above should be provided for. By this means the

whole increment of London population would operate to increase the water rents, so that it would become safe to calculate upon a growing revenue, and to leave the extinction of first cost to be attained in time by means of such growth of revenue as on a moderate calculation seems probable.

I have designated certain areas as those of London proper (upon a liberal calculation), and of a belt of districts surrounding London, including such places as Dartford, Harrow, Epsom, Romford, Enfield, and Cheshunt.

	Area Square Miles.	Population.		
		1881.	1891.	Increase.
London	380	4,609,901	5,442,249	832,348
Belt	328	158,405	195,196	36,791
	708	4,768,306	5,637,445	869,139

If we assume an increase of population in 1891—1901 of 750,000 in the London area and 50,000 in the “Belt,” we shall probably be approximately correct, and the population to be served in the middle of 1901 will be, say, 6,437,000 persons.

Supposing then that a Water Trust had been formed on the basis of the figures at the end of 1897, and had purchased the interests of share and stock holders (excluding redeemable stocks) on the terms of giving 3 per cent. water stock bearing an equivalent amount of interest, viz. £39,618,967 stock for the said interests (redeemable at any time at 120), and adopted the redeemable charges, where would the Trust have stood as at the beginning of 1901, assuming also that it took charge of the whole 708 square miles as soon as possible thereafter?

I address myself to this question merely as a man of business and a financier, not as having any engineering knowledge. I take the views of the Royal Commission contained in the Report dated December, 1899, as my guide, and modify

them to suit my less extravagant estimate of the growth of the population.

The population served would be distributed in something like the following manner :—

In present water area (1898)	5,819,583
plus 3 years' growth, say	297,417
	<hr/>
Outside the Companies' area, say	6,117,000
	320,000
	<hr/>
	6,437,000
	<hr/>
The revenue in 1897 being	£1,223,213
add for 3 years' growth	59,787
	<hr/>
	1,283,000
Outside area, 320,000 persons at 2s. 6d. each	40,000
Possible saving on management	20,000
	<hr/>
	£1,343,000
	<hr/>

The new outlays beyond the cost of the present undertakings of the eight Companies are assumed to be probably as under, including outlays since the middle of 1898 by the Companies themselves.

Cost of existing undertakings <i>outside</i> the present water area, and expenditure necessary to complete the supply of the additional area, say equal to £10 per inhabitant	£3,200,000
Cost of extensions <i>within</i> the area 1898—1901, say ...	600,000
Further for storage and other purposes, including what may have already been spent, also for any costs and compensation	4,200,000
	<hr/>
Total	£8,000,000
	<hr/>

Further, for storage, later on : an outlay of £2,000,000 to be raised in 1915–16, and £3,000,000 in 1936–7.

The annexed table is founded on the above assumptions. It is probable that the outside area would not be provided with a new and improved system without some delay, therefore £5,000,000 are supposed to be raised for the above objects by the beginning of 1901,* another £2,000,000 in the following

* Of course, the year, in practice, must be later than 1901.

year, and the remaining £1,000,000 by the beginning of 1903. The outside water rents (for 320,000 persons) are assumed to yield (net) £48,000 in the second, and £80,000 in the third year and thereafter. It is believed that the income from this source would, in a short time, cover the interest on capital employed.

The stock to be issued is assumed to bear 3 per cent., and to produce its *par* amount net. Any temporary advances are also assumed to cost 3 per cent.

It is assumed that 75,000 inhabitants will be annually added within the extended area, and that £200,000 would have to be laid out annually on capital account, not including cost of new storage reservoirs. This annual sum is assumed after a time to be provided out of current revenue and reserves.

The increase of *net* revenue from new customers and from higher assessment of old ones, is taken to be £20,000 per annum only, in view of the increasing annual charge for rates. I think if this rate of increase be not reached, it will be because population itself has increased less rapidly than the estimate supposes.

With respect to the redeemable debt, viz. £1,151,950, costing at present £34,644 per annum, it is assumed that opportunity will be taken to pay this off by the issue of stock costing only $2\frac{3}{4}$ per cent., in which case the annual charge would fall to £31,679, showing a saving of £2965 a year; but this saving has been left out of account in compiling the Table.

The result of the preparation of the Table is to confirm my opinion that no Sinking Fund should be insisted on; yet, if a hundred years hence the population of London and its neighbourhood stands at no more than twelve or thirteen millions, it would appear probable that the water supply could be provided at the same rates of charge as at present, and the enlarged works held at a cost below that now to be incurred in case of purchase.

The most serious part of the financial problem is the provision of adequate storage reservoirs, and these the latest Commission put down at about £14,800,000 if a population of thirteen millions has to be provided for. I have assumed that

only part of this sum is required to provide for less than eleven millions, the last two millions probably needing much more than their relative proportion of the suggested outlay. It would seem to be entirely unnecessary to bring a supply from Wales.

TABLE SHOWING THE WORKING OF A WATER TRUST.

Year.	Popula- tion served.	New Capital raised.*	Total Capital bearing Interest.	Annual charge.	Net Re- venue.	Applied to Capital.	Surplus end of year.	Total Surplus commence- ment of year.	Interest 2½ %.
	Thousands.	£ Thousands.	£ Thousands.	£	£ Thousands.	£ Thousands.	£	£	£
1901	6,437	5,0 0	45,771	1,373,213	1,343		†30,213		
2	6,512	2,000	47,971	1,439,213	1,371		68,213	30,213	906
3	6,587	1,000	49,171	1,475,213	1,423		52,213	98,426	2,953
4	6,662		49,371	1,481,213	1,443		38,213	150,639	4,519
5	6,737		49,571	1,487,213	1,463		24,213	188,852	5,666
6	6,812		49,771	1,493,213	1,483		10,213	213,065	6,392
7	6,887		49,971	1,499,213	1,503		3,787	2 3,278	6,699
8	6,962		50,171	1,505,213	1,523		17,787	219,491	6,585
9	7 037		50,371	1,511,213	1,543		31,787	201,704	6,051
10	7,112		50,571	1,517,213	1,563		45,787	169,917	5,093
				14,782,130	14,658		124,130	Including Interest.	†44,869
1911	7,187		50,771	1,523,213	1,583		59,787	168,999	5,070
12	7,262		50,971	1,529,213	1,603		73,787	114,282	3,429
13	7,337		51,171	1,535,213	1,623		87,787	48,924	1,318
14	7,412		51,371	1,541,213	1,643		101,787	42,545	1,063
15	7,487	2,000	53,571	1,607,213	1,663		55,787	145,395	3,635
16	7,562		53,771	1,613,213	1,683		69,787	204,817	5,120
17	7,637		53,971	1,619,213	1,703		83,787	279,724	6,993
18	7 712		54,171	1,625,213	1,7 3		97,787	370,504	9,262
19	7,787		54,371	1,631,213	1,743		111,787	477,553	11,938
20	7,862		54,571	1,637,213	1,763		125,787	601,278	15,032
				15,862,130	16,730		867,870		43,226
1921	7,937		54,571	1,637,213	1,783	200	54,213	742,097	18,552
22	8,012		54,571	1,637,213	1,803	200	34,2 3	706,436	17,661
23	8,087		54,571	1,637,213	1,823	200	14,213	689,884	17,247
24	8,162		54,571	1,637,213	1,843	200	5,787	692,918	17,322
25	8,237		54,571	1,637,213	1,863	200	25,787	716,027	17,900
26	8,312		54,571	1,637,213	1,883	200	45,787	759,714	18,992
27	8,387		54,571	1,637,213	1,903	200	65,787	824,493	20,612
28	8,462		54,571	1,637,213	1,923	200	85,787	910,892	22,772
29	8,537		54,571	1,637,213	1,943	200	105,787	1,019,451	25,486
30	8,612		54,571	1,637,213	1,963	200	125,787	1,150,724	28,768
				16,372,130	18,730	2,000	357,870		205,312

* Apart from £200,000 annual increment to correspond with 75,000 new customers.

† **Deficiency.**

‡ It is assumed that the temporary advances which will be required on these assumptions will be provided out of the rates at 3 per cent. interest not cumulative until after 1910.

TABLE, &c.—continued.

Year.	Popula- tion served.	New Capital raised.	Total Capital bearing Interest.	Annual charge.	Net Re- venue.	Applied to Capital.	Surplus end of year.	Total Surplus commence- ment of year.	Interest 2½ %.
	Thousands.	£ Thousands.	£ Thousands.	£	£ Thousands.	£ Thousands.	£	£	£
1931	8,687		54,571	1,637,213	1,983	200	145,787	1,305,279	32,632
32	8,762		54,571	1,637,213	2,003	200	165,787	1,483,698	37,092
33	8,837		54,571	1,637,213	2,023	200	185,787	1,686,577	42,164
34	8,912		54,571	1,637,213	2,043	200	205,787	1,914,528	47,863
35	8,987		54,571	1,637,213	2,063	200	225,787	2,168,178	54,204
36	9,062	500	55,071	1,652,213	2,083	2,700	2,269,213	2,448,169	61,204
37	9,137		55,071	1,652,213	2,103	200	250,787	240,160	6,004
38	9,212		55,071	1,652,213	2,123	200	270,787	496,951	12,423
39	9,287		55,071	1,652,213	2,143	200	290,787	780,161	19,504
40	9,362		55,071	1,652,213	2,163	200	310,787	1,090,452	27,261
				16,447,130	20,730	4,500	217,130		340,351
1941	9,437		55,071	1,652,213	2,183	200	330,787	1,428,500	35,712
42	9,512		55,071	1,652,213	2,203	200	350,787	1,794,990	44,875
43	9,587		55,071	1,652,213	2,223	200	370,787	2,190,661	54,766
44	9,662		55,071	1,652,213	2,243	200	390,787	2,616,214	65,405
45	9,737		55,071	1,652,213	2,263	200	410,787	3,072,406	76,810
46	9,812		55,071	1,652,213	2,283	200	430,787	3,560,003	89,000
47	9,887		55,071	1,652,213	2,303	200	450,787	4,079,790	101,994
48	9,962		55,071	1,652,213	2,323	200	470,787	4,632,571	115,814
49	10,037		55,071	1,652,213	2,343	200	490,787	5,219,172	130,479
50	10,112		55,071	1,652,213	2,363	200	510,787	5,840,438	146,010
				16,£22,130	22,730	2,000	4,207,870		860,865
1951	10,187		55,071	1,652,213	2,383	200	530,787	6,497,235	162,430
52	10,262		55,071	1,652,213	2,403	200	550,787	7,190,452	179,761
53	10,337		55,071	1,652,213	2,423	200	570,787	7,921,000	198,025
54	10,412		55,071	1,652,213	2,443	200	590,787	8,689,812	217,245
55	10,487		55,071	1,652,213	2,463	200	610,787	9,497,844	237,446
56	10,562		55,071	1,652,213	2,483	200	630,787	10,346,077	258,651
57	10,637		55,071	1,652,213	2,503	200	650,787	11,235,515	280,887
58	10,712		55,071	1,652,213	2,523	200	670,787	12,167,189	304,179
59	10,787		55,071	1,652,213	2,543	200	690,787	13,142,155	328,553
60	10,862		55,071	1,652,213	2,563	200	710,787	14,161,495	354,037
				16,522,130	24,730	2,000	6,207,870		2,521,214
1961	—	—	—	—	—	—	—	15,226,319	—

Assume that at the beginning of 1961 the capital outlay has reached... .. £55,071,000
add, paid from revenue 10,500,000

and there exists a reserve of 65,571,000
... .. 15,226,319

£80,797,319

These assets will be represented according to the Table by a debt of £55,071,000, and the surplus income will be above a million annually.

The attractiveness of the scheme for the Companies rests on the fact that 3 per cent. water stock should be worth at least 108 per cent., therefore those who are inclined to sell would obtain collectively—

For	£39,618,967	water stock	£42,788,484
Add, redeemable	1,151,950	(on $2\frac{3}{4}$ per cent. valuation)	1,248,327
Total cost ...	<u>*£40,770,917</u>	Future market value ...	<u>£44,036,811</u>

against a market value of £41,705,443 in 1897-8.

Back dividends, it will be seen, have not been provided for. It is assumed that an arbitrator would give some consideration to these, but would also estimate at some value the probable premium on 3 per cent. water stock, so that these two omitted elements might balance each other, taking all the Companies together.

The various attempts of the London County Council to escape from the ordinary terms of arbitration seem to me unnecessary and even mischievous. Back dividends become of small importance when the main consideration is present earnings. For the same reason it is unnecessary to consider how far existing capitals represent obsolete works. The power to assess water rates on increased rateable values has been given, and cannot be revoked without fair compensation. It would be equally unfair to mulct the Companies because of intended future competition, or because rates now charged might be cut down by Parliament. The same contention applies to the "bonuses" effectually received by stockholders on new issues at par, before the present practice of disposing of new stocks by public competition was instituted. This last fact cannot do more than induce us to be barely just, rather than profuse in offering terms to companies who profited by it.

* This sum, with £5,000,000 new money raised or to be raised, forms the commencing item of Debt in the table, viz. £45,771,000.

As to the assumptions in the Table, they compare thus with facts :—

			Increase in Population per cent.		Increase in Rateable value per cent.
Actual—	1811—1831	...	45·3	...	12·3
	1831—1851	...	42·8	...	45·4
	1851—1871	...	38·2	...	97·0
	1871—1891	...	29·5	...	65·3
Assumed—	1891—1911	...	(enlarged area) 27·5	...	(net revenue) 33·8
	1911—1931	...	20·9	...	25·3
	1931—1951	...	17·3	...	20·2

The increase of population would be apt to fall to zero were the limit of area too small; already the County of London is filling up, and in extensive and important areas population is diminishing.

The following facts as to the London area may be considered interesting :—

	Central 44,600 acres.	Added in						Total 243,561 acres.
		1841 10,189 acres.	1851 13,659 acres.	1861 45,600 acres.	1871 89,271 acres.	1881 24,990 acres.	1891 15,252 acres.	
1801	924,938	9,248	22,669	38,189	50,859	9,077	5,169	1,060,149
1811	1,089,257	13,346	34,161	46,070	60,228	11,299	6,042	1,260,403
1821	1,322,614	15,786	37,703	54,398	71,360	13,187	7,109	1,522,157
1831	1,591,644	18,478	41,421	63,392	81,675	15,843	8,106	1,820,559
1841	1,863,914	24,214	51,878	77,028	93,992	17,678	9,745	2,138,449
1851	2,254,951	33,153	75,155	87,508	102,680	18,872	10,278	2,582,597
1861	2,637,843	56,032	131,361	124,177	127,756	21,042	11,881	3,110,032
1871	3,015,033	113,570	167,419	197,813	216,274	25,749	14,079	3,749,937
1881	3,463,490	193,779	254,286	307,382	337,198	37,412	16,354	4,609,901
1891	3,713,816	264,868	377,021	471,969	537,744	52,768	24,063	5,442,249

Density per Acre.

1801	20·7	·9	1·7	·8	·6	·4	·3	4·4
1811	24·4	1·3	2·5	1·0	·7	·5	·4	5·2
1821	29·7	1·5	2·8	1·2	·8	·5	·5	6·2
1831	35·7	1·8	3·0	1·4	·9	·6	·5	7·5
1841	41·8	2·4	3·8	1·7	1·1	·7	·6	8·8
1851	50·5	3·3	5·5	1·9	1·2	·8	·7	10·6
1861	59·1	5·5	9·6	2·7	1·4	·8	·8	12·8
1871	67·6	11·1	12·3	4·3	2·4	1·0	·9	15·4
1881	77·7	19·0	18·6	6·7	3·8	1·5	1·1	18·9
1891	83·3	26·0	27·6	10·3	6·0	2·1	1·6	22·3

This Table makes it clear that the rate of increase in the population of a district near London does not at first afford any clue to the future rate, but after a certain density has been reached, a rapid advance takes place. The successive acreages above shown, represent successive accretions to London. The 13,659 acres include Woolwich, already populous in 1801. The 45,600 acres include Croydon, Ealing, Chiswick and Isleworth, as well as other parishes.

This law of increase does not appear to have been noticed by the Royal Commissioners, as in speaking of some districts comprised in Greater London lying outside Water London, they estimate their population in 1941 at the same rate of decennial increase as that observed in 1881-91. Neither do they allude to the absolute decrease of population over an important area in Central London.

Some other observations seem to be required, in relation to their very able and instructive Report, which raises a great many interesting questions.

SINKING FUND.

The Commissioners, in view of the great expenditure which must be incurred for storage reservoirs, do not seem disinclined to adopt the view that a Statutory Sinking Fund may be dispensed with; and it seems to me that this would be morally right as well as in practice necessary. To leave to our posterity a great asset, subject to a charge, seems to me to be defensible provided the charge is short of the value of the asset. My table shows that in circumstances such as are assumed, a capital outlay of £65,571,000 duly maintained would descend to posterity burdened with a debt costing only about £1,300,000 a year net, being a little less than we are supposed to pay now for interest on a less complete system.

They speak of 2 per cent. as a proper rate of interest to assume for the accumulation of a Sinking Fund, forgetting apparently that it is possible when issuing a 3 per cent. stock

to make it redeemable at 120. This is important in view of the fact that in any well-considered scheme, provision must be made for accumulating surplus revenue.

INTEREST ON STOCK.

I am glad to observe that the Commissioners recommend (at page 61) the creation of a 3 per cent. stock secured on the water charges of the whole area. I think it would be a mistake to propose a lower rate, and so far as concerns the issue of stock to produce to shareholders a similar income to that which they now receive, the rate would be unimportant. Its advantage will be felt later, especially if a *lower price than 120* could be fixed for redemption after an extended term such as 50 years.

COMPENSATION FOR COMPULSORY SALE.

I am completely in sympathy with the remarks of the Commissioners on page 23. A small addition to net value, to cover actual disadvantages attending reinvestment under difficulties, and not a penalty, might be granted properly by an arbitrator.

THE CHAMBERLAIN'S FUND.

This fund, in course of being created in order to prevent the Companies from gaining an advantage based on new issues of capital in case of ultimate purchase of their undertakings by the public, would naturally cease when the purchase had been carried out ; so far it is of small dimensions.

The legislative provision for this fund, and the anxieties which the Companies must feel as to future supply at enhanced cost of the growing population of London, should tend to induce the Companies to accept, at all events, such terms as I have named, if not terms even more favourable to the public.

FUTURE RATES OF CHARGE.

The explanation given at page 17 as to the existing diversity in rates of charge upon similar property is of great interest. The most simple course in order to average the existing charges might be to fix—

- (a) An initial charge per house.
- (b) A percentage on assessed value beyond, say, £20 per house.
- (c) A further percentage where, on account of elevation, there is greater cost of pumping.

I feel sure that the more wealthy class would be prepared to pay a little additional charge for their supplies in order to relieve their poorer neighbours, and equalize their burdens, especially when this readjustment could be accompanied by rigorous measures for the curtailment of wanton waste of water, now so frequent amongst the poor. I think, however, the wealthier residents would revolt against taxation imposed on them for the sake of cheapening trade supplies. I assume that a scale of extra charges for water closets, baths, gardens, &c., would still be necessary; but this should be carefully considered in view of the actual average consumption of the more highly assessed houses.

It is clear that for many years the existing rates must be maintained, subject to such readjustment *inter se* as mentioned.

OUTSIDE DISTRICTS.

In my Table I have assumed that these are all taken in hand with the least possibly delay; but I believe it will be found in practice that these had better remain for gradual absorption.* When an amended scheme of rating is in operation, there will be less difficulty in judging the effect of absorption upon local

* As I have assumed no profit in the earlier years from this source, my Table would still hold good if there were such delay.

interests, and if, fortunately, the administration of a new Water Trust excited general admiration, the disposition of local authorities might greatly change. In the meantime I agree with the Commissioners in thinking united management most advisable.

INCREASE OF THE METROPOLIS.

In support of my contention that the supply of immigrants to places like London has fallen off, and will further diminish on account of the relatively less importance of the rural districts which form the gathering ground for immigrants, and the increasing attractions of other places,* I submit the annexed Table for *whole Registration Districts* approximating to the area I have assigned to the metropolis with its belt of surrounding districts, which area is made up of single parishes.

It will be seen that in 1871-81, the net immigration is shown to be 307,013 persons, but in 1881-91 only 167,558 persons. The increase by excess of births over deaths in the meantime went up from 577,268 to 708,689 ; but the aggregate increase slightly declined, from 884,281 to 876,247.

I have ventured to suggest that the coming census will show an increase of only 800,000, and that 750,000 will afterwards be the average decennial increment.

I am aware that this is equivalent to suggesting that at no great distance of time, and perhaps already in 1891-1901, there will be found to be a net loss by migration ; this is the more probable, because of the means of information possessed by the people of London as to the attractions of other places.

* Perhaps also it may fairly be considered probable that rural densities will not indefinitely diminish.

	Population.			Actual Increase.		Excess of Births registered over Deaths.	
	1871	1881*	1891	1871-81	1881-91	1871-81	1881-91
County—							
West	561,359	669,473	740,735	108,274	71,262	59,078	62,272
North	751,729	906,052	993,884	154,218	87,832	102,402	118,583
Central	334,369	282,133	247,538	+52,131	34,595	24,433	21,337
East	639,111	692,738	705,114	53,627	12,376	100,991	102,165
South	967,692	1,265,148	1,524,472	298,235	259,324	167,571	209,631
	3,254,260	3,815,544	4,211,743	562,223	‡396,199	454,475	513,988
Surrey—							
Epsom	30,628	41,261	50,124	10,479	8,863	4,205	3,453
Croydon	83,853	119,173	151,787	35,320	32,614	15,273	18,851
Kingston	55,929	76,903	103,119	21,128	26,216	10,533	13,630
Richmond	26,145	33,633	41,548	7,488	7,915	3,681	4,486
Kent—							
Bromley	32,184	49,751	69,253	16,788	19,502	7,162	10,004
Dartford	42,344	53,435	68,702	11,091	15,267	7,620	7,630
Middlesex—							
Brentford	71,933	101,742	132,985	29,773	31,243	12,365	18,033
Hendon	37,160	54,642	96,667	17,322	42,025	7,546	12,793
Barnet	25,169	34,098	46,072	8,929	11,974	1,829	4,386
Edmonton	84,855	139,204	242,111	54,349	102,907	16,679	34,036
Essex—							
West Ham... ..	99,142	200,958	365,134	101,816	164,176	27,569	56,209
Epping	20,240	21,754	26,137	1,514	4,383	2,879	3,178
Romford	30,989	37,050	50,013	6,061	12,963	5,552	8,012
	640,571	963,604	1,443,655	322,058	‡480,048	122,793	194,701
Totals	3,894,831	4,779,148	5,655,395	884,281	876,247	577,268	708,689
Apparent balance of immigrants	—	—	—	307,013	167,558	—	—

* These are the figures published in the Census Volume for 1891. Small differences exist between these and the figures printed ten years earlier, from which the 1871 column of population and the columns of increase in 1871-81 are taken.

† Decrease.

‡ It is suggested that probably in 1891-1901 the increases may be 200,000 and 600,000 instead of 396,199 and 480,048.

CONCLUSIONS.

From the above-mentioned facts, and those given in the Report of the Royal Commission, I derive the following conclusions:—

1. That it is desirable that the water supply of London, and of a wide district around, should be in the hands of a single

authority, which I think should consist of about seven business men, fairly paid, and reappointed triennially, not more than two of whom should be named by the London County Council.

2. That the aggregate rates cannot be lowered, but must be readjusted.

3. That a statutory sinking fund would be unduly burdensome, and is unnecessary.

4. That a financial scheme resembling that which I have set out would be workable, and would leave no undue burden on future generations.

